

REMARKS

Claims 1, 3-10 and 12-22 are pending in this application.

Applicant and the undersigned wish to thank the Examiner for the courtesy of the telephone interview on February 11, 2004.

As to the above amendment to independent claims 1, 9, 10, 17, 18 and 19, to recite "with priority given to topics having a reference number that is large," and as to the corresponding amendment to independent claim 14, see, e.g., Applicant's specification at page 5, ~lines 13-14. This claim amendment is believed to be along the lines suggested by the Examiner in the telephone interview of February 11, 2004.

As to new claims 20-21 added above reciting an "electronic dictionary," see, e.g., Applicant's specification at page 8, ~line 24; claims 20 and 21 otherwise are along the lines of claims 1 and 9.

As to new claim 22 added above, see, e.g., Applicant's specification at page 13, lines 8+.

Applicant respectfully traverses the obviousness rejection.

Applicant's claim 1 recites "a reference number table which stores, for each topic, a reference number expressing how many times the topic has been referred to by a user, wherein the reference number is automatically generated and records the number of times the respective topic in the past was referred to as a search result." (Applicant's claim 1, emphasis added.) A "search process unit ... searches contents in order based on the reference number with priority given to topics having a reference number that is large." (Applicant's claim 1, emphasis added.)

None of Ishimura, Cole or Porter discloses prioritized searching as claimed. Clearly Applicant's amended claims are non-obviousness over Ishimura, Cole and Porter.

Additionally, in Applicant's presently claimed invention, the "reference number" is "automatically generated" and "records the number of times the respective topic in the past was referred to as a search result." The Examiner admits that Ishimaru fails to disclose automatic generation of the reference number.¹ Ishimura relates to an electronic dictionary, which is a main example of an "electronic manual"

¹Office Action, page 2.

which is recited in Applicant's claimed invention. (E.g., Applicant's independent Claims 1, 9, 14.)

However, the deficiency in Ishimaru is more significant than the Examiner has recognized. That the primary reference, Ishimaru, fails to disclose or teach an automatically-generated measure of how much referencing a topic receives, is a substantial deficiency. Ishimaru is dependent on manual-marking of words. In Ishimura, only what has been manually user-bookmarked can then be searched or displayed by ascending or descending frequency.

Besides Ishimaru, there is a substantial literature for electronic dictionary and electronic manual technology.² The secondary reference that the Examiner cites for allegedly supplying Ishimura's substantial deficiency, Cole, is outside the literature of electronic dictionaries and other electronic manuals. Rather, Cole relates to identifying when new web pages appear on the Internet that will interest a user. The Examiner's resort to Cole is pure hindsight reconstruction based only on Applicant's claims, and is not how a person of ordinary skill in Applicant's art would read Cole

²Such as Japanese Laid-Open Patent Application 3-237561 (discussed at col. 1, lines 38+ of Ishimaru); USP 5,940,846 ("Electronic manual displaying method for displaying a data section containing a character string found in an electronic data file"); USP 6,349,147 ("Chinese electronic dictionary"); USP 6,128,635 ("Document display system and electronic dictionary"); USP 6,085,204 ("Electronic dictionary and information displaying method, incorporating rotating highlight styles"); USP 6,047,299 ("Document composition supporting method and system, and electronic dictionary for terminology"); USP 6,009,443 ("Electronic dictionary and language interpreter with multiple inflection display"); USP 5,995,922 ("Identifying information related to an input word in an electronic dictionary"); USP 5,890,183 ("Method, apparatus, electronic dictionary and recording medium for converting converted output into character code set acceptable for re-retrieval as original input"); USP 5,745,776 ("Enhanced electronic dictionary"); USP 5,740,457 ("Electronic dictionary, its production method, and index compression and decompression device"); USP 5,655,128 ("Electronic dictionary"); USP 5,649,221 ("Reverse electronic dictionary using synonyms to expand search capabilities"); USP 5,642,522 ("Context-sensitive method of finding information about a word in an electronic dictionary"); USP 5,404,299 ("Electronic dictionary system"); USP 5,297,038 ("Electronic dictionary and method of codifying words therefor"); USP 5,241,674 ("Electronic dictionary system with automatic extraction and recognition of letter pattern series to speed up the dictionary lookup operation"); USP 5,224,041 ("Electronic dictionary for outputting words in the opposite order in which they are searched"); USP 5,189,610 ("Electronic dictionary with correct and incorrect words"); USP 4,991,135 ("Electronic dictionary"); USP 4,912,671 ("Electronic dictionary") and many more.

and Ishimura. To a person of ordinary skill in the art of electronic dictionaries and other electronic manuals, the Cole reference is separate and does not trigger the attempted modification of Ishimura that the Examiner proposes.

Ishimura and Cole are directed to two completely different areas. Electronic dictionaries and other electronic manuals have relatively-static or stable content. The normal usage of an electronic manual is highly-specific and close-ended to locating a desired piece of information. Ishimura entirely concerns content that the user already has viewed and helps him organize and manipulate the content to tell himself how useful he found it. Ishimura concerns short-cuts so that, on a later search attempt for the same target information, the user can more easily return to the desired information without being bothered again with the other undesired information. Ishimura is directed to streamlining repeat visits to the same information. It is easy to appreciate that repeat visits to the same information can be important when dealing with precision work such as foreign-language translations, where even with repeated viewing of the same information, complete confidence or familiarity may not be present and the user may need to check the same information numerous times.

The user of an electronic dictionary or other electronic manual is completely unlike the Internet web-surfer on whom Cole focuses. Cole is not dealing with a user's repeated reaching of a relatively fixed body of information. Rather, Cole essentially sets up a customized "news-service." Cole's use of a counter is for profiling the user, such as to determine that he finds "Recreation" of interest with a strong golf interest and slight football interest, etc. It is easy to see that Cole then proposes to sift through the multitudinous new web pages on the Internet to alert the user to new pages about which he may care, like a news service. For example, Cole would be used by a golf enthusiast to be told when new golf-related web pages appear on the Internet.

A person of ordinary skill in Applicant's art works with electronic dictionaries and the like fails to see anything in Cole to apply to the electronic manual technology of Ishimura. Such a person reads Cole as disclosing a way of screening and sifting new content on the Internet, and he lacks motivation to in any way combine Cole with Ishimura. The passage in Cole that the Examiner has cited would fail to receive the attention of a person of ordinary skill in the art of electronic manuals that the

Examiner argues. Such a person would fail to extrapolate or extend that passage in Cole as the Examiner argues, and would simply read it as part of the profiling in the Internet-browsing invention of Cole, nothing more.

The Examiner has indicated in the interview on February 11, 2004, that he reads the phrase “electronic manual” broadly enough to include the Internet. Applicant respectfully submits that the Examiner’s interpretation impermissibly stretches the term “electronic manual” beyond a reasonable meaning and to a meaning completely unintended by Applicant. Applicant does not use the term “electronic manual” to connote the vast, unknown Internet web pages. As Applicant’s specification states, “electronic information which is ... to be searched by the help function of the application program or searching the electronic dictionary, is collectively referred to as ‘electronic manual’.”³ “The electronic manual can have a variety of types of configurations, but in general, includes a set of parts each of which includes an explanation about an event.”⁴ “The part is referred to as ‘topic.’”⁵ Correspondingly, Applicant’s claim 1 recites: “an electronic manual composed of a plurality of topics.” Clearly Applicant means “electronic manual” for referring to an electronic dictionary or other reference material like a technical book, sourcebook or handbook already having the ordering framework of “topics”. The fact that the term “electronic manual” clearly does not connote the vast, unknown Internet web pages, can be seen by the usage of the term “electronic manual” in Applicant’s new Claim 22, and at page 13, lines 8–10 of Applicant’s specification:

“The user is not always one person. For example, a plurality of users can share the electronic manual search system 100 of the invention by using the Internet or an in-house LAN.”

(Emphasis added.) That is, Applicant’s inventive electronic manual search system is not for searching the Internet. Applicant’s inventive search system can be made available to other coworkers by an Internet connection, but the inventive search

³Applicant’s specification, page 2, lines 3-6.

⁴Id., lines 6-8.

⁵Id., line 9.

system is not suitable for searching the Internet.

The other secondary reference on which the Examiner relies is Porter. Porter also fails to supply the automatic-referencing missing in Ishimura.

The Examiner's assumption that a person of ordinary skill in Applicant's art allegedly would be motivated by Porter to modify Ishimura is flawed. The primary reference, Ishimura, is entirely focused and dependent upon a manual-book-marking scheme. Ishimura filed his priority application (from which the cited primary reference issued) in May 1996, substantially after Porter's patent issued in November 1993. The Examiner's proposed assumption about how a person of ordinary skill in Applicant's art would reason and modify Ishimura's patent tends to be rebutted by the fact that inventor Ishimura (reasonably presumed of higher skill than ordinary) himself failed to disclose an automatically-generated system. Ishimura, a person of higher-than-ordinary-skill, could visualize only a manual book-marking system. It is unreasonable to propose that someone of lesser skill could visualize more.

Also, more generally and without reference to Ishimura himself, a person of ordinary skill in the art would have been quite unmotivated by Porter to modify Ishimura, and unable to arrive at Applicant's presently claimed invention. The Examiner's proposed reading of Porter is not how a person of ordinary skill in the art would objectively read Porter. Such a person would not be motivated by Porter to modify Ishimura in the direction that the Examiner proposes. The part of Porter on which the Examiner relies is Porter's Background section, where Porter generally outlines certain search types, namely, "Sequential Search Method"; "Searching an Ordered Table"; and "Binary Search." The few lines from Porter relied upon by the Examiner are from the part of col. 1 that discusses "Searching an Ordered Table." Porter's invention does not relate to that kind of searching, but rather, to binary searching⁶ and performing a sequential search.⁷ Therefore, the reasonable reading of Porter by a person of ordinary skill in the art would be to read the lines cited by the Examiner from Porter as background; reading the rest of Porter and seeing that Porter's invention concerns another kind of search, he would lack reason to focus on

⁶Porter, see, e.g., col. 4, line 68; col. 5, line 35; col. 8, line 34.

⁷Porter, col. 8, line 35.

the few lines from the Background. It is only the Examiner's wanting to patch Ishimaru's deficiencies, that arbitrarily brings the Examiner to the part of Porter col. 1 that relates to "Searching an Ordered Table." But, that is not how a person of ordinary skill in the art of Applicant's claimed invention would have been thinking. Such a person would have no reason to focus on the lines in col. 1 of Porter relied-upon by the Examiner, and after reading Porter he would lack motivation to modify Ishimaru because he would be thinking that Porter and Ishimaru relate to different kinds of searching (binary searching and performing a sequential search in the case of Porter, which is not what is being done by Ishimaru (who is dictionary searching such as an English-Japanese dictionary)).

The rejection is further flawed for resting on the Examiner's incorrect treatment of the "record keys" of Porter, col. 1, line 49, as the same as the mark numbers 7w-2 in Fig. 10 of Ishimaru. With a proper understanding of each, the inapplicability of Porter to Ishimaru can better be appreciated.

In Fig. 10, Ishimaru shows:

| WORD | MARK NUMBER |
|-----------|-------------|
| construct | 1 |
| book | 20 |
| trouble | 14 |
| despite | 7 |

In Ishimaru, the mark number is a function of how many times the user marked the word. As words become more heavily marked in Ishimaru, the color in which they are displayed changes, as seen in Ishimaru Fig. 4, showing mark number 7C-1 and color 7C-2:

| MARK NUMBER | COLOR |
|-------------|--------|
| 10 | YELLOW |
| 20 | RED |

The point of Ishimaru is that, once a word has been marked at a first certain incremental level (such as 10 times), rather than it being displayed "regularly" it is highlighted (such as in yellow highlighting), and when it is marked more heavily at a next incremental level (such as 20 times), it is then highlighted more (such as in red).

The secondary reference, Porter, provides no useful disclosure or teaching relative to such a system of Ishimaru. Trying to combine Ishimaru and Porter would

be artificial and would not naturally follow, for a person of ordinary skill in the art. Porter does not relate to working with mark numbers or anything akin to Ishimura's mark numbers or bookmarking, or changing the color or style in which a word appears.

Rather, Porter assumes a search method that accepts an argument *a* and tries to find a record whose key is *a*. (Porter, col. 1, lines 14-15.) Porter explained that the simplest form of such a search is the sequential search, which examines each key in turn, and upon finding one that matches the search argument, its index is returned. (Porter, col. 1, lines 26+.) In the passage cited by the Examiner, Porter continues:

<<If the table is stored in ascending or descending order of the record keys, there are several techniques that can be used to improve the efficiency of searching. This is especially true if the table is of fixed size. One advantage in searching a sorted file over searching an unsorted file is in the case where the argument key is absent from the file. In the case of an unsorted file, *n* comparisons are needed to detect this fact. In the case of a sorted file, assuming that the argument keys are uniformly distributed over the range of keys in the file, only *n*/2 comparison (on the average) are needed. This is because we know that a given key is missing from a file which is sorted in ascending order of keys as soon as we encounter a key in the file which is greater than the argument.>>

(Porter, col. 1, lines 48-61, emphasis added.) That is, the lines of Porter on which the Examiner relies teach only about the case where an argument key (record key) is absent, as is seen a few lines down from the lines cited by the Examiner. Then, in such a case where an argument key is absent, Porter's invention involves grouping a doubly-linked list of data elements into smaller list segments by using a simple mathematical relationship. (Porter, col. 8, lines 27-29.)

Porter would fail to help a person of ordinary skill in the art reading Ishimaru. Porter is predicated on a search method that accepts an argument *a* and tries to find a record whose key is *a*. In Ishimura, no one is searching for words with a mark number of 10 or a mark number of 20. The search in Ishimura is in no way a function of the mark number. The mark number only comes into play after the search has been performed in Ishimura. The point in Ishimura is how to more prominently display, visually, a word as a function of how much marking (or how much or how frequent retrieval) it has received. The objectives in Ishimura and Porter are different and non-

combinable.

Nor does the combination of all of Ishimura, Cole and Porter bring a person of ordinary skill in Applicant's art any closer to the presently claimed invention. That the Examiner now has resorted to the Internet-browsing Cole patent, outside the substantial literature of electronic dictionaries and electronic manuals, is good evidence of the novelty and non-obviousness of automatic reference number generation in the context of electronic dictionaries and other electronic manuals.

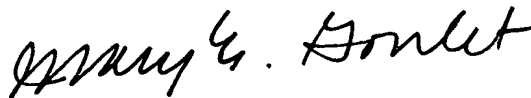
Wherefore, reconsideration and withdrawal of the obviousness rejection based on the combination of three references are respectfully requested.

In view of the foregoing, it is respectfully requested that the application be reconsidered, that claims 1, 3-10 and 12-22 be allowed, and that the application be passed to issue.

Should the Examiner find the application to be other than in condition for allowance, the Examiner is requested to contact the undersigned at the local telephone number listed below to discuss any other changes deemed necessary in a telephone or personal interview.

A provisional petition is hereby made for any extension of time necessary for the continued pendency during the life of this application. Please charge any fees for such provisional petition and any deficiencies in fees and credit any overpayment of fees to Attorney's Deposit Account No. 50-2041.

Respectfully submitted,



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